

UNIVERSITY OF MICHIGAN

DEPARTMENT OF

MEDICINE AND SURGERY

ANNUAL ANNOUNCEMENT

1893-'94

ANN ARBOR, MICHIGAN:
PUBLISHED BY THE UNIVERSITY,
1893.

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THE COURIER OFFICE, PRINTERS AND BINDERS,  
ANN ARBOR, MICHIGAN.  
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1894.

JANUARY.							FEBRUARY.							MARCH.							APRIL.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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MAY.							JUNE.							JULY.							AUGUST.						
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27	28	29	30	31	24	25	26	27	28	29	30	29	30	31	26	27	28	29	30	31

CALENDAR

OF THE

DEPARTMENT OF MEDICINE AND SURGERY.

1893-94.

1893.—SEPTEMBER	29.—EXAMINATION FOR ADMISSION AT 2 P. M.
OCTOBER	2.—LECTURES COMMENCE.
NOVEMBER	THANKSGIVING RECESS OF THREE DAYS, BEGINNING TUESDAY EVENING.
DECEMBER	22.—HOLIDAY VACATION BEGINS. [EVENING.]
1894.—JANUARY	9.—EXERCISES RESUMED.
FEBRUARY	16.—FIRST SEMESTER CLOSES. [EVENING.]
FEBRUARY	19.—SECOND SEMESTER BEGINS.
APRIL	13.—SPRING RECESS BEGINS. [EVENING.]
APRIL	24.—EXERCISES RESUMED.
MAY	30.—DECORATION DAY. [HOLIDAY.]
JUNE	15.—SESSION CLOSES. [NOON.]
JUNE	28.—COMMENCEMENT.

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UNIVERSITY OF MICHIGAN.

THE UNIVERSITY AND THE STATE.

The University of Michigan is a part of the public educational system of the State. The governing body of the institution is a Board of Regents, elected by popular vote for terms of eight years, as provided in the Constitution of the State. In accordance with the law of the State, the University aims to complete and crown the work that is begun in the public schools by furnishing ample facilities for liberal education in literature, science, and the arts, and for thorough professional study of medicine, pharmacy, law and dentistry. Through the aid that has been received from the United States and from the State, it is enabled to offer its privileges, without charge for tuition, to all persons, of either sex, who are qualified for admission. While Michigan has endowed her University primarily for the higher education of her own sons and daughters, it must be understood that she also opens the doors of the institution to all students, wherever their homes. It is in this broad, generous and hospitable spirit that the University has been founded, and that it endeavors to do its work.

FACULTY.

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64 Washtenaw Ave.

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VICTOR C. VAUGHAN, PH.D., M.D.,
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15 South State Street.

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16 Forest Ave.

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16 North State Street.

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 54 East Huron Street.

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 34 South State Street.

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79 West Huron Street.

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73 South University Ave.

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39 Church Street.

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46 South State Street.

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Assistant to the Professor of Theory and Practice of Medicine.

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Assistant Demonstrator of Anatomy.

HARRY HARLOWE BROOKS,
Assistant Demonstrator of Anatomy.

KATHARINE LOUISE ANGELL,
Assistant Demonstrator of Anatomy.

AUGUSTUS W. REED, M.D.,
House Surgeon in University Hospital.

HARRY W. HALL, M.D.,
Assistant House Surgeon in University Hospital.

JOSEPH CLARK,
Superintendent of Hospital.

ANNA HARRISON,
In charge of Training School for Nurses.

WILLIAM A. CAMPBELL, SECRETARY.

VICTOR C. VAUGHAN, DEAN.

All letters of inquiry should be addressed to the Dean, Ann Arbor, Michigan.

Department of Medicine and Surgery.

The Department of Medicine and Surgery was the first professional school established in the University. Provision was made for it in the legislative act by which the University was organized in 1837 and it was opened for students in 1850. The Faculty has constantly endeavored to give its courses of instruction in the most scientific manner. Laboratory methods were introduced with the first class, at a time when such instruction was not given elsewhere in this country except in the most superficial manner. The college year was lengthened from six to nine months in 1877, and the course increased to three years in 1880 and to four years in 1890. The requirements for admission have been constantly increased until now they are equivalent to those demanded for admission to the Department of Literature, Science, and the Arts. A combined course in science and medicine has been provided and graduate courses are now offered.

The Faculty is ambitious of having the school known, not on account of its great number of students, but for the excellence and thoroughness with which instruction is given. An efficient medical education means broad and thorough scientific training. Such an education the Medical Department attempts to give. Fifteen years ago, a young man went to a medical school, entered without examination, attended two courses of lectures of six months each, then graduated and went forth to fulfill his destiny. Such a man

might be good or bad, learned or ignorant, a success or a failure; whatever he was or developed into, he owed very little to the medical school which took his fees and in turn conferred upon him the degree of Doctor of Medicine. But times have changed and only students of liberal scientific training can graduate from our best medical schools. The subjects taught have been multiplied and this has been sufficient to demand an increase in the time of study. Not only have new sciences been made tributary to medicine but new and valuable facts have been ascertained in the older fields of investigation. Moreover, as the people become more intelligent, greater learning is required of the physician. This is shown in the laws regulating the practice of medicine, which have been enacted in many of the states within a few years. Some of the states, following the example of Illinois, require of a man who desires to practice within its territory that he shall be a graduate of a reputable school and then authorize a Board to define a reputable school. Other states, like Minnesota, refuse to recognize the diploma of any school, and graduates of the University of Berlin and other European schools of renown sometimes fail to pass these examinations. Before these examining Boards, the Graduates of the Medical Department of Michigan University have made a record of which its Faculty has a right to be proud.

Complaint is frequently made that the diploma of the American medical graduate does not confer the right to practice in Germany and other European countries. This complaint is unjust. Germany does not recognize the diplomas of its own Universities, and the graduate at home must pass a state examination before he can practice, just as a graduate of Berlin must do before he can practice in Minnesota. The graduates of this Department are admitted to the German Universities and may, as some have done, take the degree in medicine after one year. This is all which can be justly asked. It is true that the American Medical

Schools have not as a class, an enviable reputation abroad, and this can excite no wonder when we remember that only a few years ago, the best schools in this country gave the short course already mentioned and that many of the schools are continuing the same superficial methods of instruction. When our medical education earns the respect of medical men of other countries, due recognition will be given, and the conscientious and intelligent work now being done in our best schools places that time in the near future.

The college year extends from the second day of October to the Thursday following the last Wednesday of June. The lectures continue until the middle of June. The examinations are then begun and concluded in time for the Commencement exercises.

REQUIREMENTS FOR ADMISSION.

Every candidate for admission must be seventeen years of age or older, and must present to the Faculty satisfactory evidence of a good moral character.

Women are admitted, as to all other departments of the University, on the same conditions as men.

Matriculates in a regular course in the Department of Literature, Science, and the Arts, graduates of literary colleges of good standing, graduates of approved high schools,* and of other high schools of equal standing, are admitted without examination on presentation of proper evidence to the Examining Committee of the Faculty. For all others the requirements for admission are as follows:

1. ENGLISH.—An essay of not less than two pages (foolscap) correct in spelling, punctuation, capital letters, grammar, and paragraphing.
2. MATHEMATICS.—*Arithmetic*.—Fundamental Rules, Fractions

*The schools named below have been approved by the Faculty as qualified to prepare students for admission on Diploma. Unless otherwise indicated, the places named are in Michigan, and the school approved is the public high school of the locality.

Adrian; Albion; Allegan; Alpena; Ann Arbor; Aurora, Ill. (East Side); Austin, Ill.; Battle Creek; Bay City; Benton Harbor Normal and Collegiate Institute; Big Rapids; Birmingham; Caro; Charlotte; Chicago, Ill., (North Division, Northwest Division, South Division, West Division, Harvard School, Jefferson High School, Manual Training School, University School); Coldwater; Corunna; Decatur, Ill.; Denver, Colo.; Detroit; Detroit, (Detroit School for Boys); Eaton Rapids; Englewood, Ill.; Fenton; Flint; Grand Rapids; Greenville; Hastings; Helena, Mon.; Hillsdale;

(common and decimal), Denominate Numbers, Percentage, Proportion, Involution and Evolution, and the Metric Systems of Weights and Measures.

Algebra.—Fundamental Rules, Fractions, Equations of the first Degree containing two or more unknown quantities.

Geometry.—Plane Geometry.

3. PHYSICS.—An amount represented by Carhart and Chute's Elements of Physics, Avery's Natural Philosophy, or Gage's introduction to Physical Science.

4. BOTANY.—The elements of Vegetable Anatomy and Physiology as given in Gray's Lessons.

5. ZOÖLOGY.—Packard's Zoölogy, briefer course.

6. PHYSIOLOGY.—Martin's Human Body, briefer course.

7. HISTORY.—Meyer's General History, or an equivalent; and Higginson's or Johnson's History of the United States.

8. LATIN.—Jones's First Latin Book, or Harkness's Latin Reader, or an equivalent amount in any other text-book. An applicant who is not prepared to pass the examination in Latin may take a condition in this subject, which condition he must remove before entering on the work of the second year.

The examination for admission will be held at 2 P. M., Friday, September 29, 1893. Candidates are required to present themselves at this time as they are expected to be in attendance on the first day of the term, when the regular course of instruction begins. To provide for cases in which it is absolutely impossible for the candidate to be present at the time announced, supplementary examinations will be held at such times as may be determined upon by the Faculty, but no excuse, except of an urgent character, will be accepted for failure to appear at the first examination.

Before admission to examination every student is required to present to the Secretary of the Faculty the Treasurer's receipt for the payment of the matriculation fee, and the annual fee. It will, therefore, be necessary for the candidate to apply first to the Steward at his office in University Hall, register his name as a student in the department of Medicine and

Howell; Hyde Park, Ill.; Ionia; Ithaca; Jackson; Joliet, Ill.; Jonesville; Kalamazoo; Kalamazoo, (Michigan Female Seminary); Kansas City, Mo.; Kewanee, Ill.; La Grange, Ill., (Lyons township); Lake, Ill.; Lake View, Ill.; Lansing; La Porte, Ind.; Lima, Ind., (Howe Grammar School); Ludington; Manistee; Marquette; Marshall; Michigan City, Ind.; Milwaukee, Wis.; Minneapolis, Minn.; Monroe; Mt. Clemens; Muskegon; Niles; Normal, Ill., (Normal University, Academic Department); Oak Park, Ill.; Orchard Lake, (Michigan Military Academy); Ottawa, Ill.; Owosso; Peoria, Ill.; Pontiac; Port Huron; Pottstown, Pa., (Hill School); Raisin Valley Seminary; Rockford, Ill.; Saginaw, (East Side, West Side); St. Clair; St. Louis; St. Paul, Minn.; Saxton's River, Vt., (Vermont Academy); South Bend, Ind.; Springfield, Ill.; Sturgis; Toledo, O.; Traverse City; Vassar; West Bay City; Ypsilanti.

Surgery, and pay his fees to the Treasurer. In case of rejection, the money paid preliminary to examination will be refunded.

ADMISSION TO ADVANCED STANDING.

Persons who have studied medicine for one year or more may be admitted to advanced standing after having passed a satisfactory examination on all the studies which have already been pursued by the class to which they seek admission.

COURSES OF INSTRUCTION.

The course of instruction covers four college years of nine months each. The first two years are devoted to the more strictly scientific work which serves as a basis for the technical and clinical studies which follow. Medicine consists of the application of those facts gathered from the various sciences, which can be utilized in the preservation or restoration of health. The facts must be known before their application can be intelligently practiced. Knowledge is gained from one's personal observation or experience or is communicated from one to another. The former is positive knowledge, while the latter may be designated as hearsay. The medical student acquires this positive knowledge in the laboratory, in the ward and autopsy room, while he must depend for much of his information upon lectures and text-books. It is the aim of this school to give its students all the positive knowledge possible and, with this in view, great stress is laid upon laboratory instruction in chemistry, physiological chemistry, anatomy, histology, embryology, hygiene, bacteriology, pathology, and therapeutics. Facts obtained in the study of these sciences make up the medical man's mental equipment. Without this knowledge he is constantly crippled in his work, and these facts can only be satisfactorily obtained in the laboratory. The same objective method of teaching is carried into the clinical

work as will be seen from the following general outline of the course:

The forenoons are given to lectures and recitations and the afternoons to laboratory drill during the first two years and to the study of methods of diagnosis and means of treatment during the second two years. Four hours constitute a day's work in the laboratory and hospital and three lectures or recitations are given in the forenoon.

LABORATORY WORK FOR FIRST YEAR.

CHEMISTRY.—The student must become familiar with the physical and chemical properties of the various compounds employed in medicine before he can successfully prescribe them. He must know something of the solubilities and general reactions of the various bases and acids. He must see the compounds, must dissolve them and must ascertain their incompatibles by precipitation with various reagents. To do this properly, experience has shown that a course of at least twelve weeks is required. If a shorter time is given to this branch, the work is done superficially and the knowledge is imperfectly acquired.

ANATOMY.—Each student has a thorough drill in osteology. With the bones before him he studies their size and shape, the nature of their articulations, the points of origin and insertion of ligaments, tendons and muscles and the location, size and form of foramina. Then he must slowly, carefully, intelligently, under the eye of a demonstrator dissect every part of the body, and in doing so he must not only study the position, size and physiological office of each muscle but of the viscera, the blood vessels and nerves. Too often dissection means nothing more than a study of myology. If the student is to become a surgeon, it is quite as important that he should know what blood vessels and nerves are to be severed in a given operation, as to know what muscles he must traverse with his knife. If he becomes a general practitioner, he will need to recall the

anatomy of the viscera more frequently than that of the muscles. A course in surgical anatomy is also given. The student is required to make amputations and other operations upon the cadaver. The knowledge and skill thus gained arms one with a consciousness of his own resources when he is called upon to perform the operation for the first time upon the living body. The osteology is taught during the first part of the first year. Then the courses in dissection follow during the first and second years, while the surgical anatomy is given later and at a time when the student is in attendance upon the surgical clinics. The practical work in osteology and dissection requires about twenty-four weeks, and four weeks are given to the operative work.

BACTERIOLOGY.—Practical bacteriology forms a required course. That certain low forms of life cause certain diseases has been proven with the accuracy of a scientific demonstration. The object of this course is to make the student familiar with the methods of detecting, isolating and identifying the pathogenic micro-organisms. The work begins with the preparation of the various culture media and the growth of certain non-pathogenic germs on these media. After the technique of the study is understood, pathogenic germs are grown on gelatine, agar, potato, etc., animals are inoculated, the effects observed, post-mortem examinations made, and the germ isolated and identified. We have tried the teaching of this subject in each of the four years and find there is an advantage in giving it in the first year. The student who becomes familiar with the bacilli of tuberculosis, diphtheria, typhoid fever, tetanus, etc., thus early in his course takes a much more intelligent interest in these diseases when he comes to study them clinically than he can when his knowledge of them is confined to text-book or lecture descriptions. Moreover, in many diseases the bacteriological study furnishes the only means of a positive and early diagnosis. This course extends through twelve weeks.

The courses in chemistry, bacteriology, osteology, and one course in practical anatomy constitute the required work of the first year and it will be seen that every afternoon will be given to work. Students cannot enter a few weeks late and finish the required work in the nine months, unless some of this work has been done before they enter.

LABORATORY WORK FOR SECOND YEAR.

HISTOLOGY AND EMBRYOLOGY.—This course embraces a study of the microscopical structure of the normal tissues of the body, including that of the pre-natal development of the various parts and organs. This necessarily precedes the study of morbid histology or microscopical pathology. The course is given in the second year and extends through six weeks.

PHYSIOLOGICAL CHEMISTRY.—This course embraces a thorough study of the chemistry of normal and abnormal urine, including the synthetical preparations of urea and the most important members of the uric acid group, and methods for the quantitative determination of urea, uric acid, phosphates, chlorides, sulphates, sugar and albumin. Twelve weeks are devoted to this course.

ELECTRO-THERAPEUTICS.—The students are furnished materials from which they construct batteries, induction coils, cautery knives, electrodes and other appliances and with these experiments in electro-physics; electro-physiology and electro-therapeutics are conducted. This course extends over six weeks.

One course in practical anatomy and the courses in physiological chemistry, histology, and electro-therapeutics constitute the required laboratory work in the second year. Again it will be seen that all the time is demanded in order to complete these courses.

OPTIONAL AND ADVANCED SCIENTIFIC COURSES.—Some students have completed one or more of the required courses

before they enter the Medical Department and others, preferring to get all the scientific work, which may be of service in fitting them for the profession, are anxious to take certain optional or advanced courses in addition to the required work, thus extending the period of medical study to more than four years. For these the following optional courses are offered:

PHYSIOLOGY.—It is universally admitted that anatomy cannot be properly taught without practical work in the dissecting room; while physiology is generally given exclusively by lectures and text-books. Nevertheless it is certainly true that the medical practitioner needs to recall his physiological knowledge quite as frequently as he does his anatomical learning. Indeed, functional disturbances constitute probably four-fifths of the cases which come under treatment. It is quite as important for the physician to know something of the innervation of the heart as it is for him to be able to describe the arrangement of the valves. To provide for the proper and satisfactory study of physiology, a course of six weeks in the physiological laboratory has been provided. In this course the students experiment on each other as well as on animals, the object being to familiarize them with human physiology, and the apparatus and methods which can be employed in the study of the functions of the human body. This course with the lectures and class-room demonstrations gives to the study of physiology something of the importance which it deserves.

WATER-ANALYSIS.—This embraces a chemical, microscopical and bacteriological study of drinking water. Special rooms are reserved for the determination of free and albuminoid ammonia, such estimations being worthless when made in a general laboratory on account of the ammonia in the air. The lower forms of vegetable and animal life are studied and identified. Special attention is given to the methods of bacteriological examination. A large collection of both toxicogenic and non-toxicogenic water germs has

been made and the effects of the former on animals may be studied.

FOOD EXAMINATION.—A course of practical study in the detection of food adulterations is also offered.

Besides these, advanced courses in all the required work are open to those who possess the qualifications which will enable them to pursue such work with profit.

LABORATORY AND DEMONSTRATION COURSES FOR THIRD YEAR.

PATHOLOGY.—It is of the utmost importance to the student that he should have some idea of the processes of disease as without this knowledge he is in many cases entirely in the dark as to what is going on in the patient he is called on to treat when he enters a practice. It is also necessary that he should have some knowledge of these disease processes in their earlier stages, when it is possible to check them, as well as in their complete condition which has resulted in the death of the patient.

There are also other conditions where a knowledge of the minute structures or morbid histology of a tumor or new growth is an absolute necessity, as without this knowledge the practitioner is unable to decide whether an immediate operation, in many cases, is necessary or not.

To gain this knowledge a course of morbid histology is given in the pathological laboratory and the various morbid changes are examined with the microscope by the student and all departures from the normal conditions are carefully demonstrated to him.

When the student has taken this elementary course, it is open to him, if he has shown that he has profited by it at the examination, to take a further advanced course.

METHODS OF MEDICAL DIAGNOSIS.—The class is divided into small sections so that each individual can be instructed. Beginning with practice in auscultation, percussion, etc., on healthy persons, the student proceeds to study the various

signs of disease, studying them at first as isolated phenomena. Later, patients are examined with a view of making complete diagnoses. Owing to the unusual facilities enjoyed by the students during the first two years in the study of bacteriology, histology, and physiological chemistry, much time is gained for the consideration of other diagnostic manipulations, but instructive specimens of urine, blood, vomited matters, sputa, etc., are frequently submitted to the students in order to test, freshen and emphasize their chemical, microscopical and bacteriological teaching. This elementary course fits the student for the more direct clinical work, which accompanies these demonstrations in the junior year and to which more time is given in the senior year.

METHODS OF DIAGNOSIS AND TREATMENT OF NERVOUS DISEASES.—The duties of the demonstrator in nervous diseases will be to instruct junior students:

- (1) In the topography of the peripheral distribution of nerves, motor and sensory.
- (2) In the localization of function in the brain and spinal cord.
- (3) In tests of nerves of special sense and general sensation; skin and mucous membrane reflexes.
- (4) In motor reactions and tendon reflexes.
- (5) In normal and pathological electric reactions.
- (6) In methods of diagnosis of nervous diseases.
- (7) In the therapeutical uses of electricity.

OPERATIVE SURGERY.—This course will comprise:

- (1). Bandaging and fracture dressing.
- (2). Operations upon the cadaver, in which amputations and other surgical operations will be made by the student under the eye of the demonstrator.
- (3). Operations upon animals, in which amputations, laparotomies, etc., are done by the student with all the attention to detail in antisepsis, asepsis, dressing, etc., bestowed upon similar operations upon man,

DEMONSTRATIONS IN OBSTETRICS.—With proper manikins and models the student is taught what to do in the various presentations and in the emergencies which may occur in obstetrical practice. This course fits the student

for the lying-in-room in which he has during his senior year an opportunity of demonstrating his obstetrical knowledge.

DEMONSTRATIONS IN OPHTHALMOLOGY, LARYNGOLOGY, ETC.—This course consists of a drill in the practical use of the ophthalmoscope, laryngoscope, and other instruments employed in the diagnosis and treatment of diseases of the eyes, nose, ear and throat. Manikins, animals, healthy and diseased men are utilized in this work.

The junior class is divided into sections for the purpose of taking these courses and five weeks are given to each. The course in pathology, like the laboratory courses of the first two years, requires four hours per day, while the other demonstrations occupy from one to two hours per day, thus leaving several hours of each afternoon for the more strictly clinical work which the third year students take with those of the fourth year.

FOURTH YEAR.

During the fourth year the entire time is given to clinical work. Clinics are held every afternoon in the amphitheatre, and great stress is laid upon ward and bedside teaching. Students are assigned patients whose cases they study, handing in to the professor a written history with remarks upon diagnosis and treatment. In the study of these cases students have access to the clinical laboratory and the use of a microscope, chemical reagents, apparatus, instruments for examining the blood, pulse, etc. Bacteriological cultures are frequently required and the staining of sputa, examination of urine, etc., form a part of the daily work. A record is kept of each student's diligence and success in these studies and is consulted in determining his fitness for the degree. The clinical material utilized in this work is large and varied. Every student has an opportunity of learning not only the common phenomena of disease, but also many of those which are more rarely met with.

Didactic clinical lectures extend through the junior and senior years and recitations are held upon the lectures, clinics, and subjects assigned for reading from books. After having had the first two years of more strictly scientific work the student gets a fund of practical information from his clinical years which he could not otherwise acquire.

INSTRUCTION FOR WOMEN.

The course of instruction for women is in all respects equal to that for men. Practical anatomy is pursued by the two sexes in separate rooms, and some of the lectures and demonstrations, which it is not desirable to present to the two sexes together, are given to them separately; but in most of the lectures, in public clinics, in the several laboratories, and in various class exercises, it is found that both sexes may attend with propriety at the same time.

SCHEDULE OF STUDIES.

FIRST YEAR.

LECTURES AND RECITATIONS IN FIRST SEMESTER.

<i>Subjects.</i>	<i>Hours Required.</i>
Osteology and Descriptive Anatomy,	5 hours per week.
General Chemistry,	5 hours per week.
Bacteriology,	4 hours per week.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

<i>Subjects.</i>	<i>Hours Required.</i>
Descriptive Anatomy,	3 hours per week.
Physics,	4 hours per week.
Organic Chemistry,	5 hours per week.
Histology,	3 hours per week.

LABORATORY WORK THE FIRST YEAR.

<i>Subjects.</i>	<i>Hours Required.</i>
Anatomy,	Every day for 12 weeks.
Chemistry,	Every day for 12 weeks.
Bacteriology,	Every day for 12 weeks.

SECOND YEAR.

LECTURES AND RECITATIONS IN FIRST SEMESTER.

<i>Subjects.</i>	<i>Hours Required.</i>
Anatomy,	5 hours per week.
Physiology,	5 hours per week.
Hygiene,	3 hours per week.
Embryology,	2 hours per week.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

<i>Subjects.</i>	<i>Hours Required.</i>
Anatomy,	5 hours per week.
Physiology,	5 hours per week.
Physiological Chemistry,	3 hours per week.
Hygiene,	2 hours per week.

LABORATORY WORK IN THE SECOND YEAR.

<i>Subjects.</i>	<i>Hours Required.</i>
Anatomy,	Every day for 12 weeks.
Physiological Chemistry,	Every day for 12 weeks.
Histology,	Every day for 6 weeks.
Electrotherapeutics,	Every day for 6 weeks.

THIRD YEAR.

LECTURES AND RECITATIONS IN FIRST SEMESTER.

<i>Subjects.</i>	<i>Hours Required.</i>
Theory and practice,	2 hours per week.
Surgery,	3 hours per week.
Obstetrics and Gynæcology,	3 hours per week.
Materia Medica and Therapeutics,	5 hours per week.
Pathological Histology,	2 hours per week.
Nervous Diseases,	1 hour per week.

LECTURES AND RECITATIONS IN SECOND SEMESTER.

Same as in the first semester.

LABORATORY AND DEMONSTRATION COURSES IN THIRD YEAR.

Practical Pathology, Elementary Course,	Every day for 4 weeks.
In Physiology (optional),	Every day for 5 weeks.
In Clinical Medicine,	Every day for 5 weeks.
In Nervous Diseases,	Every day for 5 weeks.
In Operative and Minor Surgery,	Every day for 5 weeks.
In Obstetrics and Gynæcology,	Every day for 5 weeks.
In Ophthalmology, Otology, and Laryngology,	Every day for 5 weeks.
Practical Pathology—Advanced Course. Classes will be arranged according to the number of students wishing to take them.	

CLINICAL COURSES IN THIRD YEAR.

<i>Subjects.</i>	<i>Hours Required.</i>
Internal Medicine,	2 hours per week.
Surgery,	2 hours per week.
Gynæcology,	2 hours per week.
Ophthalmology,	2 hours per week.
Nervous Diseases,	1 hour per week.

FOURTH YEAR.

LECTURES AND RECITATIONS IN THE FOURTH YEAR.

<i>Subjects.</i>	<i>Hours Required.</i>
Theory and Practice,	3 hours per week.
Surgery,	3 hours per week.
Obstetrics and Gynæcology,	3 hours per week.
Diseases of Nervous System,	2 hours per week.
Dermatology and Syphilology,	2 hours per week.
Ophthalmology, Otology, and Laryngology,	1 hour per week.
Pathology,	2 hours per week.

CLINICAL COURSES IN THE FOURTH YEAR.

<i>Subjects.</i>	<i>Hours Required.</i>
Internal medicine,	2 hours per week.
Surgery,	2 afternoons per week.
Obstetrics and Gynæcology,	2 afternoons per week.
Dermatology and Syphilology,	2 hours per week.
Ophthalmology, Otology, and Laryngology,	2 hours per week.
Diseases of Nervous System,	1 hour per week.

BEDSIDE AND DISPENSARY INSTRUCTION.

Senior students are given charge of patients, required to make diagnoses, prescribe, dress wounds, and make minor operations under the eye of the professor in charge. A lying-in-ward furnishes obstetrical cases, which are attended by the senior students in rotation.

**COMBINED COURSES IN THE DEPARTMENT OF LITERATURE,
SCIENCE, AND THE ARTS, AND IN THE
MEDICAL DEPARTMENT.**

All of the courses of the first two years of the preceding schedule are given as optional courses in the Department of Literature, Science and the Arts. This gives the literary student who intends to enter medicine an opportunity, by electing from the courses of the first two years of the medical curriculum, of shortening from one to one and

one-half years his total period of residence at the University. The literary faculty has consented to permit such students, who desire to avail themselves of this provision and who have demonstrated their capacity by good work, to register in the medical department at the close of the third college year. The Bachelor's degree will be conferred as heretofore, at the end of the fourth year, and the exact length of time after this before the degree M. D. will be conferred will depend upon the number of required medical courses which the student has completed. While this opportunity is offered alike to B. S. and B. A. students, it will happen that the majority of students who intend to study medicine will prefer the B. S. course in Biology. The required studies of this course are as follows:

Im French: (*a*) for those who enter *without* French, one and three-fifths full course;

or (*b*) for those who enter *with* French, a four-fifths course.

In German: (*a*) for those who enter *without* German, one and three-fifths full courses;

or (*b*) for those who enter *with* German, a four-fifths course.

In English: Practical rhetoric and composition, essays and speeches.

In Philosophy: Elementary logic or general psychology.

In Mathematics: Algebra, analytical geometry, and plane trigonometry.

In Physics: Mechanics, sound and light.

In general Chemistry: Elementary inorganic chemistry, descriptive and experimental.

In general Biology: Elementary and laboratory biology every day for one year.

In Biological work: Additional, five full courses.

From the optional courses offered the student must choose and complete enough to make in all twenty-six full courses before he can obtain the degree of B. S. in Biology. In making these electives the student can choose and take, as far as he is able, the scientific work of the first two years of the medical curriculum. In this way it will be possible for a student to obtain the degree of M. D. after he has been in the medical department for six semesters, or six

years after entering the department of Literature, Science, and the Arts.

GRADUATE COURSES.

The rapid development of medical science has necessitated the introduction of many new subjects into the curriculum, and this leads practitioners, who wish to keep abreast of the times, to return to the University in order to take special courses in the newer subjects. Moreover, at the present time many of the laboratory and demonstration courses mentioned in the preceding schedules are not given in other American Medical Colleges, and there have been frequent requests for admission to this course from graduates of such schools. The frequency of these requests has led the Board of Regents to authorize the faculty to admit medical graduates to any one or more of the regular courses when such graduates give evidence of their ability to profit by such instruction. In such cases the graduate student must pay ten dollars tuition for each course taken in addition to the ordinary laboratory expenses of such course.

This graduate work is also offered to students who have taken the full required courses. Some of these courses may be outlined as follows:

COURSES IN HYGIENE AND BACTERIOLOGY.

a. This consists of advanced bacteriological studies such as the student may elect. This course is open only to those who have taken the required course in bacteriology.

b. This is arranged especially for health officers and includes the chemical and bacteriological examinations of food, water, soil and air.

IN ELECTRO-THERAPEUTICS.

a. This covers the subjects of diagnosis, electrolysis, and the management of continuous current and cautery batteries, induction coils and the static machine in their therapeutic applications.

IN PATHOLOGY.

a. A course in microscopical technique will consist in preparing material for examination, cutting sections and the use of microtome, staining and mounting sections.

b. In this course instruction will be given in the changes produced in the different organs of the body by disease, in the histological structures of the various neoplasms and other abnormal conditions.

c. In this course special investigation will be made into the pathology of particular diseases, either by direct examination of affected parts, or by experimental investigation on the lower animals. This is research work and only those who have shown some ability in this line of work will be admitted.

COURSES IN PHYSIOLOGY AND HISTOLOGY.

a. A course in physiological demonstrations, especially those intended to illustrate class lectures. This course is designed for those who teach physiology, but have not had opportunity of learning the methods of preparing physiological experiments and vivisections.

b. For those who have had sufficient training in laboratory methods, the apparatus and facilities of the laboratory may be used for the investigation of special problems.

c. A course in histological technique including the methods of preparing, staining and sectioning tissues. This course is designed for those desiring to fit themselves for histological research.

d. A course on the microscopical anatomy of the eye and ear and the central nervous system.

IN CHEMISTRY.

a. Graduates may select work in any of the courses provided for the several departments of the University. The courses in analytical chemistry and organic chemistry, twenty-one in number, are designated in the University Calendar. Special studies for individual purposes may be undertaken. Opportunity for research is given. The chemical library is supplied with the extensive repositories of science required in research, and with a wide range of literature of applied chemistry. In any part of the laboratory, graduates may select any work they are prepared to pursue.

IN ANATOMY.

a. Graduates are offered special courses in the anatomy of the nervous system of man, and other vertebrates, also extended studies of the organs of special sense, and facilities are offered for the thorough anatomical study of regions of special surgical interest.

IN THERAPEUTICS.

a. A study of the influence of certain drugs on the metabolism of tissue.

b. A study of the methods of modern pharmacological research.

Both of these will be laboratory courses and will require a knowledge of physiological chemistry and of the methods of the physiological laboratory.

Terms.—The tuition for each graduate course of six weeks is \$10 in addition to the laboratory expenses, which will vary with the character of the work.

RULES CONCERNING EXAMINATIONS.

1. Examinations (either written or oral, or both) will be held at the close of each course or semester. The results of each examination must be reported by the professor in charge, within ten days, to the Secretary of the Faculty.

2. No professor will be allowed to give a certificate or written statement concerning the results of the examinations to the students, but all reports must be made in writing to the Secretary.

3. A student may be marked "Passed," "Conditioned," or "Not Passed." Students reported as "Conditioned" cannot apply for re-examination in the same subject until the close of the next course or semester, except that a student "Conditioned" at the close of the college year, may apply for re-examination during the first or second week of the following college year. A student reported "Not Passed" cannot apply for re-examination until he has again taken the course in which he has failed.

4. Candidates for graduation failing in an examination will be allowed a re-examination before the entire faculty, and failing in that, such student may again present themselves for examination at the expiration of a time which shall be determined by the faculty, but which shall be not less than three months nor longer than twelve months.

5. No student is permitted to enter the senior class who

has not removed all conditions in his freshman and sophomore work, and no student is permitted to continue in the senior class unless all junior conditions are removed by the end of the first semester.

6. All conditions not passed off within one year become "Not Passed."

7. No student will be recommended for graduation until all his required work is completed and all his examinations are passed.

REQUIREMENTS FOR GRADUATION.

To be admitted to the degree of Doctor of Medicine, a student must be twenty-one years of age and possess a good moral character. He must have completed the required courses in laboratory work, and have passed satisfactory examinations on all the required studies included in the full course of instruction. He must have been engaged in the study of medicine for the period of four years. If admitted to advanced standing, he must have attended at least three full courses of medical lectures, *the last two of which must be in this Department*, and have passed the required examinations.

FACILITIES FOR INSTRUCTION.

There are ample collections of plates, photographs, models, specimens, preparations, apparatus and instruments for illustrating the different studies embraced in the course. Additions are made from time to time to these collections, so that the members of the Faculty are able to adopt every new method of illustration, and to exhibit to the classes each year all important improvements in the way of instruments and apparatus that are employed in the practice of medicine and surgery, and to show their application.

The following paragraphs may serve to indicate the

extent of some of these collections and the character of the work done in the several laboratories.

MUSEUM OF ANATOMY.

The museums of Professors FORD and SAGER, embracing several thousand specimens, the result of many years' labor in collecting and preparing materials intended to aid directly in teaching, are now the property of the University, and are used in the daily work of the class rooms. The museums contain a valuable collection of bones, illustrating healthy as well as diseased conditions, the various changes that occur from infancy to old age, and the processes of first and second dentition; dissections, general and partial, of the vascular, nervous, and muscular systems, both normal and abnormal; models of various portions of the body in wax, papier maché and plaster, illustrating morbid growths, skin diseases, etc.; preparations in the comparative embryology, neurology and craniology of the vertebrata; in human embryology, in the anatomy and pathology of the diseases of women, etc. The collection of monstrosities, both single and double, of man and the lower animals, is one of the largest in the United States.

MATERIA MEDICA.

The collections illustrative of Materia Medica consist of a very complete collection of crude organic medicinal substances, finely displayed in a special room in the chemical laboratory, and arranged according to their order in Natural History; also about one thousand other specimens of simple mineral and vegetable substances, and pharmaceutical and officinal preparations, active principles, etc., arranged in groups convenient for study. Medical Botany is further illustrated by several hundred large finely-colored plates.

ANATOMICAL LABORATORY.

The Anatomical Laboratory is admirably adapted for its purpose; the rooms are large, well lighted, and well ventilated.

The Anatomical Law of Michigan furnishes, without embarrassment, an ample supply of material for the purpose of practical anatomy. All students who have completed the requirements in descriptive and practical anatomy, pursue a course in operative surgery upon the cadaver.

In their first year, medical students have opportunity, under competent instruction, to study comparative anatomy and physiology practically by dissecting various animals. While thus becoming familiar with structures and tissues, they also acquire dexterity in the use of instruments preparatory to work upon the human cadaver.

CHEMICAL LABORATORY.

The Chemical Laboratory provides thorough instruction and suitable appliances for the practical study of all branches of medical chemistry. In each of the two laboratory courses *required for graduation*, namely, qualitative chemistry (devoted to the study of chemical changes and incompatibilities), and analysis of urine (applied to clinical uses and physiological study), students are taken in sections of limited number for daily drill in the class room, to direct the daily practice in the laboratory. Before beginning laboratory work the student takes a preparatory course, with daily recitations, in chemical notation, and at the close of the work in each course is held to an examination.

ELECTRO-THERAPEUTICAL LABORATORY.

The Laboratory of Electro-Therapeutics is supplied with apparatus for illustrating all methods for generating electric currents and for measuring currents, voltages, and resistances.

The students are furnished materials from which they construct batteries, induction coils, cautery knives, electrodes, and other appliances, and, with these, experiments in electro-physics and physiology and electro-therapeutics are conducted.

It is the aim in this laboratory instruction to make the student practically familiar with the faults and essential requirements of all forms of electrical apparatus made use of for therapeutical purposes.

PHYSIOLOGICAL LABORATORY.

The apartments provided for the Physiological Laboratory offer excellent facilities for practical work, whether of class instruction or of original investigation. A large and well-lighted room is appropriated chiefly to the use of undergraduate students who perform under the direction of instructors most of the fundamental physiological experiments. As far as possible the experiments being made on men. The subjects commonly embraced in the practical course relate to the physiology of the special senses, muscular contraction, nerve, reflex action, circulation, respiration, and digestion. A smaller room is devoted to advanced work and original investigation. Conveniently situated are an apparatus room, a dark chamber for optical experiments, an incubation closet, and a large workshop containing machinists' and carpenters' appliances. The instrumental equipment of this laboratory is unusually complete, and contains most of the more essential instruments used in physiological demonstration and research. The apparatus is all new and is of the highest finish and accuracy. The list of instruments includes: five du Bois induction coils; two rotating cylinders with clock-work; one Ludwig's kymographion;

tuning-forks for electrical interruption; one adjustable electrical interruptor with clock-work; Fisk's spring-kymograph; recording chronographs; Brown's spectroscope; Thompson's galvanometer; Roy-Gaskell heart tonometer; Zeiss microscopes; foot lathe with working tools; etc. The laboratory is open daily for physiological experiment and research.

HISTOLOGICAL LABORATORY.

The Histological Laboratory is well supplied with microscopes, microscopical accessories, microtomes, imbedding apparatus, and other instruments used in histological work. During his term of instruction in the laboratory each student is furnished with microscopical reagents, a microscope, and a table for his own use, so that the practical work is carried out by each individual for himself. In the elementary course an effort is made to teach the student the use of the microscope, the methods of teasing, and the methods of mounting paraffine and celloidine sections. The sections given are so arranged as to furnish specimens of the elementary tissues and of the organs.

In the course on microscopical technic, which is open only to those who have completed the elementary work, the student is instructed in the various methods of hardening, staining, imbedding, section-cutting, and injecting, the special methods of staining and counting red and white blood cells, and the use of the microscope in forensic medicine.

An optional course in the practical embryology of the salamander and the chick (open to students who have completed the elementary work in histology, a course in microscopical technic, and attended lectures in embryology) is offered.

Opportunity for original work in histology and embryology is given to those capable of undertaking it.

PATHOLOGICAL LABORATORY.

The Pathological Laboratory is furnished with microscopes made by R. & J. Beck, Bausch & Lomb Optical Co., and Zeiss, adapted for every requirement. There is also a special microscope with apochromatic object glass, by Zeiss, for high-power work. There is an ample supply of material for all microscopical study in pathology and every requisite for the cultivation and examination of pathogenic bacteria.

The work in this laboratory comprises an elementary and an advanced course. The elementary course is a required course, taken in the third year. It includes all ordinary practical work in connection with the study of the processes of disease as seen with the microscope. Students who have taken the elementary course and have proved themselves capable of undertaking further work are eligible for the advanced course. This advanced course may consist of an extension of the work previously done

or it may be confined to an investigation into the diseases of the lower animals. On completing the advanced course, the student is competent to undertake an investigation in the highest branch of pathology, the causation of disease, but special investigations of this description cannot be made during the regular four years' course of study. They must be carried on in a post-graduate course, unless the student is willing to devote more than the required four years to his studies before graduation.

Each student is supplied with a microscope and with such apparatus, reagents, and materials as he needs, with the exception of glass slides and covers. The specimens made by him during the course are his property, and he thus obtains a typical set of slides, illustrating all the ordinary forms of disease.

Autopsies.—Post-mortem examinations of all available cases are made before the senior class, and selected students assist at each examination. Sections of the senior class are also instructed in the methods of making post-mortem examinations. No stated times can be set for this instruction, but every student is expected to take part in a post-mortem examination before presenting himself for the final examination in the course in pathology.

HYGIENIC LABORATORY.

The Hygienic Laboratory was opened for work in January, 1889. There is a large room devoted to bacteriological work, which contains all of the improved apparatus employed by Koch. The course in bacteriology extends through three months and requires four hours daily in the laboratory for this time. All the known pathogenic and the most important non-pathogenic germs are studied. The microscopes used are those of Zeiss and Leitz. All animals needed for experimentation are supplied by the laboratory. There are also courses in the chemical and bacteriological examination of drinking water, and in the study of food adulterations. Besides these, advanced students who wish to do practical work in the study of ptomaines and leucomaines are accommodated.

The objects had in view in the establishment of this laboratory were as follows: (1) Original research as to the causation of disease. (2) Sanitary examination of food and drink. (3) Instruction to students.

Besides the large bacteriological room, there are rooms fitted especially for gas analysis and water analysis, and private rooms for original research. There are also a cold chamber, a disinfecting chamber, and an animal room.

MUSEUM OF NATURAL HISTORY AND LIBRARY.

Students in medicine have access to the botanical, zoölogical, and geological cabinets of the University, estimated to contain 255,000 specimens. The General Library, containing nearly 66,000 volumes, of which

8,000 are medical works, is also open to all students. A complete catalogue of the library, arranged both by authors and by subjects, is accessible to readers. The leading medical periodicals of this country and of Europe are taken and kept on file.

THE UNIVERSITY HOSPITAL.

The University Hospital, of sufficient capacity for a large number of patients, is thoroughly equipped, and is in the immediate charge of a competent house surgeon and physician and an experienced matron. The whole is placed under the direction of the Faculty, who attend regularly upon the patients (each upon such cases as come within his special department) and give clinical instruction in the wards to advanced students. In connection with the hospital there is a spacious clinical amphitheatre where clinics are regularly held every day during the college year, for medical, surgical, gynæcological, ophthalmological, neurological, dermatological, and venereal cases, at which time examinations are made, prescriptions given, and surgical operations performed in the presence of the class.

A lying-in ward is established in which senior students are given an opportunity to attend cases of labor and become familiar with the duties of the lying-in room, under the immediate direction of the professor of obstetrics and his assistant.

Students are required to take the history and keep a record of patients, and under proper supervision, are offered an opportunity of personally examining the patients. It is the aim of the Faculty to make instruction in this branch of medicine systematic and thorough, and this they are enabled to do by an abundance of interesting cases which present themselves in the clinic every year.

For the treatment of diseases of the nervous system the hospital is furnished with apparatus for generating all kinds of electric currents. Attendants especially skilled in the

application of electricity and massage are put in charge of such cases.

A large portion of the cases admitted to the hospital are from a distance and are of more than common interest, including many cases of chronic diseases of the lungs, the heart, and the nervous system.

The hospital is kept open for patients during the whole year, but no contagious diseases are admitted. Under the present organization, patients are much better accommodated, and clinical instruction is rendered more systematic and efficient than was formerly possible. The expenses to patients are only for their board, for unusual appliances or special nursing, and for medicines, the services of the Faculty being rendered gratuitously to those made available for clinical instruction.

Patients who desire to enter the hospital are requested to write to the resident physician, Dr. A. W. Reed, to ascertain if there is room for their accommodation, and to obtain a circular giving more fully the rules governing admission.

TEXT-BOOKS AND BOOKS OF REFERENCE.

The books mentioned in the following list are standard authorities, and will form a good nucleus for a medical library. Any one of those mentioned in each department will answer the necessities of the student; and, whenever a preference exists, it is given to the one first in order on the list:

MEDICAL DICTIONARY.—National or Gould's.

ANATOMY.—Gray; Quain; Morris; Holden.

HISTOLOGY.—Klein's Elements of Histology; Schäfer's Essentials of Histology; Quain's Anatomy, Vol. I, Pt. II. General Anatomy or Histology. *For Reference*.—Toldt's Lehrbuch der Gewebelehre; Koelliker's Handbuch der Gewebelehre des Menschen; Behrens, Kossel and Schifferdecker Die Gewebe des Menschlichen Körpers; Klein's Atlas of Histology. *Embryology*.—Hertwig-Mark's Text-Book of Embryology; Quain's Anatomy, Vol. I, Pt. I. Embryology. *For Refer-*

ence.—Minot's Human Embryology; Marshal's Vertebrate Embryology; Koelliker's *Entwicklungsgeschichte des Menschen und der höheren Thiere*.

PHYSIOLOGY.—Foster's Text-Book of Physiology; Martin's Human Body; Yeo's Manual of Physiology; McKendrick's Text-Book of Physiology.

HYGIENE.—Sternberg's Manual of Bacteriology; Parke's Hygiene; Pettenkoffer and Ziemsen, *Lehrbuch der Hygiene*; Fraenkel's Elements of Bacteriology; Flügge, *Die Micro-Organismen*; Baumgarten, *Lehrbuch der pathologischen Mykologie*; Cornil et Babes, *les Bactéries*; Macé, *Traité de Bacteriologie*; Wanklyn, *Water Analysis*; Fox, *Sanitary Examinations*; Tiemann and Gärtner, *Untersuchung des Wassers*.

CHEMISTRY.—*General Chemistry.*—Freer's Text-Book of General Chemistry; Remsen's Introduction to the Study of Chemistry. *For Laboratory.*—Prescott's First Book in Qualitative Chemistry; Vaughan's Physiological Chemistry; Vaughan and Novy's Potomains and Leucomaines.

PHYSICS.—Gage's; Ganot's.

PHARMACOLOGY, MATERIA MÉDICA AND THERAPEUTICS.—*Pharmacology.*—Schmiedeberg's Grundriss der Arzneimittellehre or Dixon's translation; T. Lauder Brunton's Pharmacology, Therapeutics and Materia Medica; Erich Harnack's Lehrbuch der Arzneimittellehre. *Practical Therapeutics.*—Hare's System of Therapeutics in three volumes. *Toxicology.*—Kobert's Praktische Toxikologie.

PATHOLOGY.—Ziegler; Hamilton; Payne; Delafield and Prudden. *For Laboratory.*—Gibbes' Practical Pathology and Morbid Histology.

OBSTETRICS.—Parvin; Lusk; Playfair; Leishman; Galabin; Winckel. *For Reference.*—Schroeder; Cazeaux and Tarnier; American system of Gynæcology and Obstetrics. Barnes' Obstetric Medicine and Surgery. *Special Subjects.*—Barker on Puerperal Diseases. Obstetric nursing by Parvin.

DISEASES OF WOMEN.—Thomas; Emmet; Skene; Goodell's Lessons in Gynæcology; Byford, Diseases of the ovaries and tubes. Edis on Diseases of Women. *Reference Books.*—American System of Gynæcology and Obstetrics; Tait on Diseases of Women and Abdominal Surgery. *Special Subjects.*—Tilt on Uterine Therapeutics; Emmet on Vesico-Vaginal Fistula; Skene on Diseases of Bladder and Urethra; Courty on Diseases of Uterus and Ovaries; Doran on Gynæcological Operations; Skene on change of Life.

DISEASES OF CHILDREN.—J. Treves Smith; Ashby; Wright. *For References.*—Henoch; Keating's Cyclopædia of the Diseases of Children.

PRACTICE OF MEDICINE.—Osler; Strümpell; Lyman; Flint; Roberts. *For Reference.*—Text-Book of Theory and Practice, edited

by Pepper. *Special Subjects*.—von Jacksch on Clinical Diagnosis; Vierordt's Diagnostick or Stuart's translation; Flint's Manual of Auscultation and Percussion; Dictionary of Treatment; Da Costa's Medical Diagnosis.

DISEASES OF THE NERVOUS SYSTEM.—Ross; Gower; Hammond; Bramwell on Diseases of the Spinal Cord; Ranney's Anatomy of Nervous System.

DERMATOLOGY AND SYPHILOLOGY.—Duhring; Crocker; Robinson; Hyde; Jamieson; Van Harlingen's; Jackson's Hand-Books; Hardaway's Manual; Pye-Smith's Introduction. *Special Subjects*.—Bulkley on Acne and Eczema; Keyes; Culver and Hayden's Manual on Venereal Diseases. Fox; Cornil; Hutchinson on Syphilis. *For Reference*.—Taylor's; Morrow's Atlases.

SURGERY.—American Text-Book of Surgery; Ashhurst; Walsham's Practical Surgery. *Special Subjects*.—Billroth on Surgical Pathology; Stimson on Fractures and Dislocations; Reeve's Orthopædic Surgery; Otis on Diseases of the Genito Urinary Organs. *Minor Surgery and Surgical Appliances*.—Mear's Practical Surgery; Hopkins on Bandaging. *For Reference*.—International Encyclopædia of Surgery; Agnew's Surgery; Cornil on Syphilis.

OPHTHALMOLOGY AND OTOTOLOGY.—*On the Eye*.—Noyes; Swanzy. *On the Ear*.—Burnett; Roosa; Buck. *On the Nose*.—Sajous. *On the Throat*.—Bosworth. *For Reference*.—Landolt on Refraction; Brown on the Ophthalmoscope; Sciler on the Throat. Norris and Oliver, System of Diseases of Eye. Burnett, System of Diseases of Ear, Nose and Throat.

FEES AND EXPENSES.*

MATRICULATION FEE.—For Michigan students, *ten dollars*; for all others, *twenty-five dollars*.

ANNUAL FEE.—For Michigan students, *twenty-five dollars*; for all others, *thirty-five dollars*.

DIPLOMA FEE.—For all alike, *ten dollars*.

The total amount of fees paid to the University during the whole four years' course, for matriculation, incidental expenses, materials used, and diploma, is, for Michigan

*The Matriculation Fee and the Annual Fee must be paid in advance, and no student can select his seat until after such payment. No portion of the fee can be refunded to students, who leave the University during the academic year, except by order of the Board of Regents.

students, about \$256.00; and for others, about \$311.00; varying a little with the student's actual laboratory expenses. In the laboratories, the students pay for the material, and the expenses vary somewhat with the care and economy practiced. The required laboratory and demonstration courses cost approximately as follows:

Anatomy-----	\$20 00
Chemistry-----	15 00
Bacteriology-----	15 00
Physiological Chemistry-----	15 00
Histology-----	3 00
Electro-Therapeutics-----	8 00
Pathology-----	10 00
Operative Surgery-----	10 00
Demonstration Course in Medicine-----	10 00
" " " Obstetrics-----	10 00
" " " Nervous Diseases-----	10 00
" " " Laryngology and Ophthalmology---	10 00

A deposit of the amount indicated for each of the above is required before the work of the course is begun.

OTHER EXPENSES.—Students obtain board and lodging in private families from three to five dollars a week. Clubs are also formed in which the cost of board is from two to two dollars and a half a week. Room rent varies from seventy-five cents to two dollars a week for each student. There are no dormitories and no commons connected with the University. Students on arriving in Ann Arbor can obtain information in regard to rooms and board by calling at the Steward's office.

LETTERS OF INQUIRY, ETC.—All letters of inquiry should be addressed to Dr. Victor C. Vaughan, Dean of the Department of Medicine and Surgery, Ann Arbor, Michigan.

Students arriving in Ann Arbor, and desiring further information should apply at the office of the Secretary in the Medical Building. The office will be open daily during the last week in September, and the Secretary will be in attendance each day from 2 to 5 P. M.

List of Graduates of 1892.

- | | |
|---|---|
| Ezra T. Abbott, | George Smith Davenport, |
| Joseph L. Abt, | John Halvor Dent, |
| Arvid Andersson, | Fred Norton Dewey, A.M. (<i>Hills-</i> |
| Clayton W. Armitage, | <i>dale College</i>), |
| Victor Bodine Ayers, | John William Dobson, |
| Nettie Estella Bainbridge, | Stewart McLellan Doherty, |
| Emil Fred Baur, Jr., | Charles Edgar Dorrance, |
| Thomas Edward Beaupre, | Homer Corbett Edwards, |
| Bertram Henry Beekwith, | Charles Howard Emery, |
| William Herman Bell, | Edwin Robert Espie, |
| Emily Augusta Benn, A.B., | Edward Norton Ewer, |
| Thomas Blair, | Royal Twombly Farrand, |
| James Henry Bogan, | Anna Maria Flynn, |
| William Knapp Branch, | Augustus William Foy, |
| George Henry Brash, | Luey Woodward Gardner, |
| John Aaron Broberg, | Howard Bishop Garner, |
| Thomas Earl Burgess, | Hugh William Graham, |
| George Washington Burrier, | George Willard Green, |
| Wilson Canfield, | Ernest William Haass, |
| Henrietta A. Carr, | Clarence Wilkie Harris, |
| Angus Raymond Carton, | Charles Neigs Harrison, |
| John Baptist Casello, | John Henry Hauptmann, |
| Shadrach Chaffin, | George Stanton Hollister, |
| Starr King Church, Ph.C., | William Amos Holt, |
| Lemuel Churchill, B.S., (<i>Michigan</i> | James Eldrid Hosmer, |
| <i>Agricultural College</i> , | Lulu May Hudson, B.L., (<i>Ohio</i> |
| Orton Horace Clark, | <i>Wesleyan University</i>), |
| Charles Dewitt Colby, | Frank Blair Humphreys, |
| Joseph Franklin Condon, | James Walter Irwin, |
| Emma Diantha Cook, | Henry Milnor Joy, |
| Norman Kershaw Cox, D.D.S., | Leo Ray Keeney, |
| Daniel Devine Cunningham, L.L.B., | Mary Anna Kimball, |
| George Robert Curran, B.S., | Julius James Klein, |
| (<i>Carleton College</i>), | Theophil Klingmann, Ph.C., |

Theresa Knauf.	Frank Ernest Ruggles,
Peter John Livingstone,	John Schee,
Edward Carter Lyman,	Edwin Elmer Sheffield, Ph. B.,
Frank Lyons,	(<i>Denison University</i>),
William Arthur MacGugan,	Henry Stults Sheffield,
Peter Duncan MacNaughton,	Rachael Anna Groff Smith,
Webster Clark Martin,	Richard Root Smith,
Reuben Maurits,	Jeanne Cady Solis,
James Edward Maxwell,	LeRoy Southmayd,
David McClurg,	Julia Ione Stannard,
George Washington Moran,	Herbert Otto Statler,
John Hermon Mowers,	George William Stewart,
Herman George Niermann, Ph.C.,	William Issachar St. John, Ph.C.,
Peter Juul Noer, B.S., (<i>University</i>	George Frank Suker,
<i>of Wisconsin</i>),	John Nelson Swartz,
Walter Noyes,	Herbert Thurtell,
James Donaldson Parker, A.B.,	Penry Charles Valentine,
(<i>Upper Iowa University</i>),	William P. Walter.
Wallace Asahel Parker, A.B.,	Edward Crawford Warren,
(<i>Harvard University</i>),	John Davis Watterson,
Albert Summerfield Payne,	Dirk John Werkman, A. B., (<i>Hope</i>
Clyde Phillips Platts,	<i>College</i>),
Henry John Poppen,	William Walter Wertenberger,
Albert Eugene Powell,	Jacob Frederick Wesh,
Frank Randolph,	Joseph Burgess Whinery, Ph.C.,
Augustus Walter Reed,	Annie Wells Williams,
Samuel Beatty Robb,	Hubert Wallace Wilson,
Don Alphonso Root,	John Graham Wilson,
William Anderson Royer,	

Students.

RESIDENT GRADUATES.

NAME.	RESIDENCE.
George Henry Cattermole, M.D.,	<i>Fort Madison, Iowa.</i>
Julia Ione Stannard, M.D.,	<i>Dexter.</i>
Fred Eugene Warren, M.D.,	<i>Denver, Col.</i>

FOURTH YEAR STUDENTS.

NAME.	RESIDENCE.	*CREDENTIALS.
William Coleman Armstrong,	<i>Nelson, Pa.</i>	Col. Inst. D.
Samuel Howard Arthur,	<i>Ann Arbor,</i>	H. S. D.
James Meade Atkinson,	<i>Warren, O.,</i>	Col. Inst. D.
Herbert Edwin Baright,	<i>Battle Creek,</i>	Univ. D.
Fannie Lewis Bishop,	<i>Oxford, O.,</i>	Ex.
William Blair,	<i>Chambersburg, Pa.,</i>	H. S. D.
Morell Deloss Cadwell,	<i>Leon, O.,</i>	Col. Inst. D.
Anna Clapperton,	<i>Grand Rapids,</i>	H. S. D.
Luella Sophia Cleveland,	<i>Battle Creek,</i>	Col. M.
Katherine Richards Collins,	<i>New Albany, Ind.,</i>	H. S. D.
Anna Craig,	<i>Rochester, N. Y.,</i>	Normal D.
Nicholas De Haas,	<i>Fremont,</i>	H. S. D.
Frederic Campbell Gillen,	<i>Grand Haven,</i>	H. S. D.
Alice Hamilton,	<i>Fort Wayne, Ind.,</i>	Ex.
Rosemond Luella Hathway,	<i>East Liverpool, O.,</i>	Ex.

*These abbreviations are given to show the extent of education which the student had when he entered upon the study of medicine, and are to be interpreted as follows:

H. S. D.—High School Diploma.

UNIV. D.—University Diploma.

COL. D.—College Diploma.

NORMAL D.—Diploma from Normal College.

UNIV. M. AND COL. M. mean that the student has been a regular matriculate in some university or college, but has not completed a course.

Ex.—Examination.

When the course given by the institution from which the student brings his credentials is not up to the standard required on page 13, the student must pass an examination in the branches in which these deficiencies occur:

NAME.	RESIDENCE.	CREDENTIALS.
George Edgar Hoffman,	<i>Chicago, Ill.,</i>	Col. D.
William Fremont Hubbard,	<i>Battle Creek,</i>	H. S. D.
Leroy Bromwell Humphrey,	<i>Greensburg, Pa.,</i>	H. S. D.
Aleck Franklin Hutchinson,	<i>Clyde, O.,</i>	H. S. D.
Maria P. de Booiij Ingram,	<i>Brooklyn, N. Y.,</i>	Col. D.
John Henry Jones,	<i>Dowagiac,</i>	H. S. D.
Harry James Kennedy,	<i>Ionia,</i>	Univ. D.
Stella Kirby,	<i>Burlingame, Kan.,</i>	Col. D.
Alvena Mauerhan,	<i>Parma,</i>	H. S. D.
Deville J. Moyer,	<i>Stony Forks, Pa.</i>	Ex. "
Archibald Lawrence Muirhead,	<i>Ann Arbor,</i>	Col. M.
James Perry Odell,	<i>Fremont,</i>	H. S. D.
Frank Dean Patterson,	<i>Marshall,</i>	Univ. D.
William Wilson Pearson,	<i>Springfield, Ill.,</i>	H. S. D.
Frank Beckham Powers,	<i>Knoxville, Tenn.,</i>	Univ. D.
George Roberts,	<i>Buffalo, N. Y.,</i>	Col. D.
Henry Rudolph Roether,	<i>Perrysburg, O.,</i>	Ex.
Charles Whitall Root,	<i>Ann Arbor,</i>	Univ. M.
Mary Sanderson,	<i>Amherst, Mass.,</i>	Col. D.
Willam Oscar Sauermann,	<i>Detroit.</i>	Univ. M.
Frederick Glazier Smith,	<i>Battle Creek,</i>	Col. M.
Sarah Amelia Wilcox Soule,	<i>Ann Arbor,</i>	H. S. D.
Charles Newton Sowers,	<i>Hart,</i>	Univ. M.
Cora Lane Stoner,	<i>Greensburg, Pa.,</i>	Col. D.
William Grant Tucker,	<i>Buck Creek, Ind.,</i>	Ex.
James Curtis Twitchell,	<i>Saginaw,</i>	Ex.
Frank Alsworth Waples,	<i>Ann Arbor,</i>	Univ. D.
William Adam Wehe,	<i>Topeka, Kan.,</i>	H. S. D.
Emma Hammond Wheeler,	<i>New Bedford, Mass.,</i>	H. S. D.
Robert Henry Wolcott,	<i>Grand Rapids,</i>	Univ. D.
Truman Norton Yeomans,	<i>Oxford, N. Y.,</i>	Col. D.

THIRD YEAR STUDENTS.

NAME.	RESIDENCE.	CREDENTIALS.
Ernest Marion Adams,	<i>Battle Creek,</i>	H. S. D.
Minnie Maud Allen,	<i>Portland, Ore.,</i>	H. S. D.
Robert Bruce Armstrong,	<i>Saginaw, East Side,</i>	Col. D.
James Rae Arneill,	<i>Ventura, Cal.,</i>	Univ. D.
Merritt Moses Ayers,	<i>Tedrow, O.,</i>	Col. Inst. D.
Arthur Melvin Beatty,	<i>Battle Creek,</i>	Col. D.
Frithiof Emil Berge,	<i>Sturgeon Bay, Wis.,</i>	Ex.
Clarissa Sophia Bigelow,	<i>Ann Arbor,</i>	Univ. D.

NAME.	RESIDENCE.	CREDENTIALS.
Vacil Demetroff Bozovsky,	<i>Stanimaka, Bulgaria,</i>	Col. D.
James Fleming Breakey,	<i>Ann Arbor,</i>	H. S. D.
Christopher Brogan, Jr.,	<i>White Oak,</i>	Ex.
Sidney Payne Budgett,	<i>Portland, Ore.,</i>	Univ. M.
George Warner Burleigh,	<i>Battle Creek,</i>	Col. M.
Edgar Robert St. John Caro,	<i>Battle Creek,</i>	Col. D.
Theodore Lincoln Chadbourne,	<i>Vinton, Ia.,</i>	Univ. D.
Willis Earl Chapman,	<i>Sparta,</i>	H. S. D.
Augustus Warren Crane,	<i>Adrian,</i>	H. S. D.
Louis Edgar Deary,	<i>Greenville,</i>	H. S. D.
John Alexander Donovan,	<i>Gladstone,</i>	Col. M.
George Henry Dow,	<i>Battle Creek,</i>	Univ. M.
Calvin R. Elwood,	<i>Pontiac,</i>	H. S. D.
Sallie Price Falconer,	<i>Fort Smith, Arkansas,</i>	Ex.
John William Foley,	<i>Ann Arbor,</i>	H. S. D.
Joseph Foster,	<i>Lansing,</i>	Col. D.
John Henry Frost,	<i>Ann Arbor,</i>	Col. D.
José Ramon Gallegos,	<i>San José, Costa Rica,</i>	Col. D.
Charles Arthur Gardner,	<i>Detroit,</i>	Col. M.
William Aaron George,	<i>Battle Creek,</i>	Col. D.
John Evans Gernand,	<i>Rossville, Ill.,</i>	Univ. D.
Stephen Clifton Glidden,	<i>Spokane, Wash.,</i>	Univ. M.
James Louis Heard,	<i>North East, Pa.,</i>	H. S. D.
Clarence Burke Hernam,	<i>Grand Rapids,</i>	Ex.
Howard Herrington,	<i>Santa Clara, Cal.,</i>	H. S. D.
Frederick William Heysett,	<i>Ludington,</i>	H. S. D.
Brainard Spencer Higley, Jr.,	<i>Youngstown, O.,</i>	H. S. D.
Minnie Hoagland,	<i>Howell,</i>	Normal D.
Charles Eggleston Hooker,	<i>Charlotte,</i>	H. S. D.
Elijah Mark Houghton,	<i>Therese, N. Y.,</i>	Col. M.
Annie Ives,	<i>Sparta, Ont.,</i>	H. S. D.
Wilfred Kennedy Keith,	<i>Creston, Ia.,</i>	Col. D.
Herbert Perry Kellogg,	<i>Battle Creek,</i>	Ex.
Leverge Knapp,	<i>Ouleout, N. Y.,</i>	Univ. M.
Daniel Hartman Kress,	<i>Battle Creek,</i>	Col. D.
Lauretta Kress,	<i>Battle Creek,</i>	H. S. D.
Horace Hall Loveland,	<i>Newark, N. Y.,</i>	H. S. D.
Edward Lowry Martindale,	<i>Fulton, Ill.,</i>	H. S. D.
Charles Thomas McClintock,	<i>Lexington, Ky.,</i>	Univ. D.
Julian McClymonds,	<i>Winchester, Ky.,</i>	Univ. M.
Orianna McDaniel,	<i>Dover, N. H.,</i>	H. S. D.
Robert McGregor,	<i>Sault Ste. Marie,</i>	Ex.
George Edwin McKean,	<i>Dundee, O.,</i>	Normal D.

NAME.	RESIDENCE.	CREDENTIALS.
Edward Everett McKnight,	<i>Grand Rapids,</i>	Normal D.
Edgar Calvin Leroy Miller,	<i>Watson, Mo.,</i>	Normal D.
Frank Benjamin Moran,	<i>Battle Creek,</i>	H. S. D.
Carlton Dolphin Morris,	<i>Decatur,</i>	H. S. D.
Frank Edwin Moyer,	<i>Samaria,</i>	H. S. D.
Edwin Andrew Murbach,	<i>Archbold, O.,</i>	Col. D.
Charles Russell Nutt,	<i>Plymouth, Wis.,</i>	H. S. D.
Stephen Grant Olmsted,	<i>Freeland,</i>	H. S. D.
Alfred Berthier Olsen,	<i>Battle Creek,</i>	Col. M.
Fred Wheeler Palmer,	<i>Brooklyn,</i>	H. S. D.
Norton Hills Pardon,	<i>Monroe,</i>	Ex.
David Paulson,	<i>Battle Creek,</i>	Col. D.
John Abraham Pratt,	<i>Jackson,</i>	H. S. D.
Howard Frederick Rand,	<i>Battle Creek,</i>	Col. D.
William Henry Rheinfrank,	<i>Perrysburg, O.,</i>	Univ. M.
Delia Maud Rice,	<i>Galesburg, Ill.,</i>	Col. D.
William Philip Schierding,	<i>Palatine, Ill.,</i>	H. S. D.
Albert Philip Steinhart,	<i>Allegan,</i>	Col. D.
Edith Sturges,	<i>Chicago, Ill.,</i>	Col. D.
Peter Martin Van den Berg,	<i>Grand Haven,</i>	Ex.
Clark Randolph Wilcoxson,	<i>Ypsilanti,</i>	H. S. D.
Albert Stotiff Wilson,	<i>Lynedoch, Ont.,</i>	H. S. D.
Martha Abigail Winegar,	<i>Battle Creek,</i>	Col. M.
Ephraim Harrison Winter,	<i>Warren Mills, Wis.,</i>	Col. M.
Walter George Wright,	<i>Grinnell, Ia.,</i>	Col. D.

SECOND YEAR STUDENTS.

NAME.	RESIDENCE.	CREDENTIALS.
Florence Almeda Amidon,	<i>Sturgis,</i>	H. S. D.
Katharine Louise Angell,	<i>Chicago, Ill.,</i>	Univ. M.
William Gilbert Archer,	<i>Battle Creek,</i>	Col. D.
William Richardson Bagley,	<i>St. Charles, Ill.,</i>	H. S. D.
Helen Grace Baldwin,	<i>Battle Creek,</i>	Col. M.
Adam John Baumhardt,	<i>Hutchinson, Kan.,</i>	Col. D.
Louisa Ressa Black,	<i>Glen Ebon, O.,</i>	Ex.
Harry Harlowe Brooks,	<i>Lake Crystal, Minn.,</i>	Univ. M.
George Oliver Brown,	<i>Collins,</i>	Ex.
William Elliott Brown,	<i>Kalamazoo,</i>	H. S. D.
Robert J. Bunyan,	<i>Kendallville, Ind.,</i>	H. S. D.
William Thomas Burke,	<i>Emery,</i>	Ex.
Sarah Ellen Conner,	<i>Utica,</i>	H. S. D.
Jennie Mottram Cooke,	<i>Kalamazoo,</i>	Col. M.

NAME.	RESIDENCE.	CREDENTIALS.
Thomas Benton Cooley,	<i>Ann Arbor,</i>	Univ. D.
Henry Le Roy Crummer,	<i>Omaha, Neb.,</i>	Univ. M.
Paul Marley Day,	<i>Detroit,</i>	H. S. D.
Arthur Carl Dennert,	<i>Elkhart, Ind.,</i>	H. S. D.
Peter Donnelly,	<i>Napoleon, O.,</i>	H. S. D.
Bernard Joseph Downey,	<i>Ottawa, Ill.,</i>	H. S. D.
Peter Doyle,	<i>Grand Rapids,</i>	Ex.
John Watson Durkee,	<i>Bowling Green, Ky.,</i>	Col. M.
Hiram Marcellus Farnham,	<i>Fenton,</i>	H. S. D.
Bryon Sinclair Gailey,	<i>Ashland, Ill.,</i>	H. S. D.
Dirk Gleysteen, Jr.,	<i>Holland,</i>	Col. D.
William Benjamin Govan,	<i>Oxford,</i>	Ex.
Maria Louise Graham,	<i>New Bedford, Mass.,</i>	H. S. D.
Harriet Louise Hawkins,	<i>Ypsilanti,</i>	Ex.
Harry Ashford Haze,	<i>Lansing,</i>	Col. M.
William Silas Hewitt,	<i>Bright, Ont.,</i>	Col. M.
Meyer L. Heidingsfeld,	<i>Greenville, O.,</i>	Univ. M.
John Ernest Hinkson,	<i>Lexington,</i>	Col. D.
George Steadman Holden,	<i>Palmer, Mass.,</i>	Univ. D.
George Franklin Inch,	<i>Oak Point, N. B.,</i>	Col. M.
Frank Jacobi,	<i>Toledo, O.,</i>	Ex.
Arthur Henry Johnson,	<i>Danville, Wis.,</i>	Ex.
Flavius Josephus Knight,	<i>Clinton,</i>	H. S. D.
Minnie M. Knott,	<i>Westville, Mo.,</i>	Normal D.
Herbert George Lampson,	<i>Scymour, Wis.,</i>	Ex.
Robert Eben Lee,	<i>McGaheysville, Va.,</i>	Col. D.
Eliza Ellen Leonard,	<i>Tacoma, Wash.,</i>	Col. D.
Parker Hunter Lewis,	<i>Lexington, Ky.,</i>	Col. M.
William Swift Loomis,	<i>Ann Arbor,</i>	Univ. M.
Henry H. Lucas,	<i>Lucas,</i>	Col. D.
W. T. Lungershausen,	<i>Mt. Clemens,</i>	H. S. D.
Robert Julius Lynn,	<i>Monticello, Wis.,</i>	H. S. D.
Daniel Walton MacMillan,	<i>Xenia, O.,</i>	Univ. D.
Roscoe Beldon Martindale,	<i>Herkimer, N. Y.,</i>	Col. D.
Benjamin Brown Masten,	<i>Ann Arbor,</i>	Univ. M.
Ezra Hinmann Mathewson,	<i>Birmingham,</i>	H. S. D.
Samuel Alexander Matthews,	<i>Ainsworth, Ia.,</i>	Col. D.
John Charles Maxwell,	<i>Decatur,</i>	Col. D.
Neil Sutherland McDonald,	<i>Lake Linden,</i>	H. S. D.
Roderick J. McDonald,	<i>Black River,</i>	Ex.
Johnson Chambers McGahey,	<i>Cedar River,</i>	Col. D.
Jessie Edith Midgley,	<i>Ann Arbor,</i>	H. S. D.
Lewis Craig Miller,	<i>North Benton, O.,</i>	Col. M.

NAME.	RESIDENCE.	CREDENTIALS.
Joseph L. Miller,	<i>Kewanee, Ill.,</i>	Univ. M.
Lillian Belle Miller,	<i>Watson, Mo.,</i>	Normal D.
Fred Hopkins Moore,	<i>Bay City,</i>	H. S. D.
Ellen Bradford Murray,	<i>Ypsilanti,</i>	Normal D.
Earl Stimson Niblack,	<i>Wheatland, Ind.,</i>	Col. D.
Emory Leroy Niskern,	<i>Muskegon,</i>	Col. M.
George Gallahyer Bratten Nusum,	<i>Reels, Ia.,</i>	Ex.
Henry Edward Odell,	<i>Toledo, O.,</i>	H. S. D.
Charles Stanton Olinger,	<i>Lebanon, O.,</i>	Col. M.
Frank Albert Olms,	<i>Palatine, Ill.,</i>	H. S. D.
Viola Josie Perry,	<i>Orion,</i>	H. S. D.
Jane Elizabeth Pettigrew,	<i>Muskegon,</i>	Ex.
Frank Stanley Pierce,	<i>Utica,</i>	H. S. D.
Philip Henry Quick,	<i>Noble,</i>	Ex.
John J. Ratcliffe,	<i>Waukon, Ia.,</i>	H. S. D.
John Randolph Rogers,	<i>Rome, Italy,</i>	Univ. D.
Alfred William Scobey,	<i>Kankakee, Ill.,</i>	Univ. D.
Duncan Charles Shields,	<i>Alvinston, Ont.,</i>	H. S. D.
Claude Le Baron Sigler,	<i>Pinckney,</i>	Ex.
Lincoln G. Simon,	<i>Battle Creek,</i>	Ex.
Chiron Waterville Smith,	<i>Warren, Mass.</i>	H. S. D.
Sara Sillon Smyth,	<i>Buffalo, N. Y.,</i>	Ex.
Fred De Forest Snyder,	<i>Ann Arbor,</i>	Ex.
Florence Nightingale Stanbrough,	<i>Westfield, Ind.,</i>	H. S. D.
Charles Eugene Stewart,	<i>Battle Creek,</i>	H. S. D.
William Gale Stinchcomb,	<i>Bellefontaine, O.,</i>	H. S. D.
George W. Torrey,	<i>Manchester,</i>	Ex.
Philo Adelbert Tyler,	<i>Olivet,</i>	Col. D.
Andrew Uren,	<i>Calumet,</i>	H. S. D.
Carl Cleghorn Warden,	<i>Ann Arbor,</i>	Univ. D.
Augustus Sherman Warner,	<i>Crown Point, Ind.,</i>	H. S. D.
Albert Crandall Way,	<i>Binghamton, N. Y.,</i>	Ex.
Frances Tudor Weed,	<i>Lake City, Minn.,</i>	Normal D.
Jacob Butler White,	<i>Lincoln, Neb.,</i>	Univ. D.
Fred John Wildanger,	<i>West Bay City,</i>	Ex.
George Henry Williamson, Jr.	<i>Saginaw,</i>	H. S. D.
Theodore Byron Wood,	<i>Muskegon,</i>	Ex.
William Jeremiah Woodlin,	<i>Battle Creek,</i>	H. S. D.

FIRST YEAR STUDENTS.

NAME.	RESIDENCE.	CREDENTIALS.
Frances Morton Allen,	<i>Thompson, N. Dak.,</i>	Univ. D.
Irving Charles Allen,	<i>Avon, N. Y.,</i>	Ex.

NAME.	RESIDENCE.	CREDENTIALS.
Susie Anderson,	<i>Barry, Col.,</i>	H. S. D.
Patience S. Archer,	<i>Battle Creek,</i>	Col. D.
Gardner Jabez Bigelow,	<i>Sandusky, O.,</i>	Univ. M.
Chester Bradley Bliss,	<i>Springfield, O.,</i>	Col. M.
Allen Borden,	<i>Ann Arbor,</i>	Normal D.
Charles Francis Boyden,	<i>Evansville, Ind.,</i>	Ex.
Joseph Brayshaw,	<i>Bower's Mills, Mo.,</i>	Col. D.
Asahel E. Briggs,	<i>South Haven,</i>	Col. M.
J. Ernest Browne,	<i>Fowlersville,</i>	H. S. D.
Arthur H. Burleson,	<i>Ann Arbor,</i>	Normal D.
Charles Harvey Burritt,	<i>Maumee, O.,</i>	Ex.
John Henry Caffrey,	<i>Eaton Rapids,</i>	H. S. D.
Dwight Calkins,	<i>Allegan,</i>	H. S. D.
Elizabeth Campbell,	<i>Ripley, O.,</i>	H. S. D.
Gertrude Dart Campbell,	<i>Mason,</i>	Col. D.
David R. Clark,	<i>Ann Arbor,</i>	H. S. D.
George Willis Clarke,	<i>Ovid,</i>	H. S. D.
Lewellyn Martha Clinton,	<i>Rochester, N. Y.,</i>	Col. M.
William Edward Coates, Jr.,	<i>Manistee.</i>	Ex.
Rufus Ivory Cole,	<i>Peru, Ill.,</i>	H. S. D.
John William Cooper,	<i>Terre Haute, Ind.,</i>	Univ. M.
David Murray Cowie	<i>Battle Creek,</i>	Col. M.
James Henry Davis,	<i>Atwater, Ill.,</i>	Col. M.
Jerome DeMotte,	<i>Otwell, Ind.,</i>	Normal D.
Iegar R. DeVries,	<i>Drenthe,</i>	Col. M.
Arthur Victor Doud,	<i>Lyndonville, Vt.,</i>	H. S. D.
Thomas John Dougherty,	<i>Beacon,</i>	Univ. M.
John Christian Eigenmann,	<i>Chicago, Ill.,</i>	H. S. D.
Elenora S. Everhard,	<i>Ripon, Wis.,</i>	Col. D.
Frank Deverine Fanning,	<i>Butler, Ind.,</i>	H. S. D.
Charles Edmund Fisher,	<i>Toledo, O.,</i>	H. S. D.
Penelope McNaughton Flett,	<i>Nelson, New Brunswick,</i>	Col. D.
Gilbert Bird Furness,	<i>Ogdensburg, N. Y.,</i>	H. S. D.
Carrie Lilla Garlock,	<i>Ames, N. Y.</i>	Ex.
Katherine Eliza Geiger,	<i>Jackson,</i>	H. S. D.
George Adam Geist,	<i>Detroit,</i>	H. S. D.
Minnie Alvira Goss,	<i>Shepherd,</i>	Normal D.
Elmer Asa Griggs,	<i>Eckford,</i>	H. S. D.
Theodore Charles Guenther,	<i>Sandusky, O.</i>	H. S. D.
Jennie Julia Hall,	<i>Grand Rapids,</i>	H. S. D.
Norman Lee Harris,	<i>South Bend, Ind.</i>	H. S. D.
Arthur McAnn Harrison,	<i>Napoleon, O.,</i>	H. S. D.
Frank Matthews Harrison,	<i>Napoleon, O.</i>	H. S. D.

NAME.	RESIDENCE.	CREDENTIALS.
Charles William Hartloff,	<i>Evansville, Ind..</i>	Univ. D.
Howard Davis Haskins,	<i>Cleveland, O.,</i>	Univ. D.
Maud Lillibridge Hassard,	<i>Brooklyn, N. Y.,</i>	Normal D.
Carrie Mary Hayward,	<i>Malden, Mass.,</i>	H. S. D.
Simon Clyde Herrick,	<i>Ann Arbor,</i>	H. S. D.
Mary Cornelia Heilesen,	<i>Battle Creek,</i>	Col. M.
Raymond LaGrand Heller,	<i>Napoleon, O.,</i>	H. S. D.
Harry Sanburn Holmes,	<i>Caribou, Me.</i>	H. S. D.
Helen Hughes.	<i>Blue Earth City, Minn.,</i>	Col. D.
Frances Hulbert,	<i>Richardson, Wis.,</i>	Col. M.
George Henry Jewett,	<i>Ann Arbor.,</i>	Univ. M.
Callender La Fayette Johnson,	<i>Battle Creek,</i>	Col. M.
Charles Fremont Johnson,	<i>Milan,</i>	Ex.
Benj. Franklin Patterson Johnson,	<i>Brampton, Ont.,</i>	H. S. D.
Charles Kahn,	<i>Joliet, Ill.,</i>	H. S. D.
Ida Kahn,	<i>Kiukiang, China.,</i>	Ex.
Charles Llewellyn Kennedy,	<i>Sylvania, O.,</i>	Univ. M.
Cornelia Frances Kerr,	<i>Ann Arbor,</i>	Ex.
Harry Walton Kirby,	<i>Texarkana, Ark.,</i>	Col. M.
Casper K. Lahuis,	<i>Zeeland,</i>	Col. M.
Mary Elizabeth Lapham,	<i>Northville,</i>	Ex.
James Joseph Lasalle,	<i>Toledo, O.,</i>	Ex.
Arthur Patterson Lee,	<i>St. John, New Bwk.,</i>	Ex.
Muret Napoleon Leland, Jr.,	<i>Wells, Minn.,</i>	H. S. D.
James Robert Le Touzel,	<i>Goderich, Ont.,</i>	Ex.
Lucien Gex Locke,	<i>Haverhill, O.,</i>	Col. M.
Kittie Evalyn Long,	<i>Lansing,</i>	H. S. D.
Mary Grace Luwg,	<i>Wilkes Barre, Pa.,</i>	Normal D.
William Edward Mackey,	<i>Detroit.</i>	Normal D.
Cornelia Bennett MacKinney,	<i>Brooklyn, N. Y.,</i>	Ex.
Minnie Sprague Marshall,	<i>Ann Arbor,</i>	H. S. D.
George William Mathews,	<i>Worcester, Mass.,</i>	H. S. D.
David Peter Mayhew,	<i>Detroit,</i>	H. S. D.
Charles Samuel McIntyre,	<i>Woodland,</i>	H. S. D.
David Gregg Metheny,	<i>Pittsburg, Pa.</i>	Ex.
Clarence Volney Moores,	<i>Springfield, O.,</i>	Col. M.
Harry Morris,	<i>Vassar,</i>	H. S. D.
Hiram Beach Morse,	<i>Sanilac Centre,</i>	Ex.
Joseph Robert Mountain,	<i>St. Johns.</i>	Ex.
Saxe Whither Mowers,	<i>La Fayette, Ind.,</i>	Col. D.
Thomas Francis Murphy,	<i>Adams, Mass.,</i>	Col. M.
John Paul Mylott,	<i>Youngstown, O.,</i>	Col. M.
Christian Peter Nelson,	<i>Battle Creek,</i>	H. S. D.

NAME.	RESIDENCE.	CREDENTIALS.
Ethan A. Nevin,	<i>Helen, N. Y.,</i>	H. S. D.
Robert Henry Nichols,	<i>Chester,</i>	H. S. D.
Norman Perkins Nims,	<i>Monroe,</i>	H. S. D.
Albert Patrick O'Leary,	<i>The Dalles, Ore.,</i>	Normal D.
Joseph John Parker, Jr.,	<i>Chicago, Ill.</i>	H. S. D.
Manly Ligon Parker,	<i>Grand Valley, Pa.,</i>	H. S. D.
Bert Newton Parmenter,	<i>Kalamazoo,</i>	H. S. D.
George Drinan Perkins,	<i>Bridgetown, Barbadoes,</i>	Ex.
Anna Louise Preston,	<i>Marietta, O.,</i>	Ex.
George Edwin Reycraft,	<i>Mackinaw City,</i>	Col. M.
Edward Egleston Rohrbaugh,	<i>Delphi, Ind.,</i>	H. S. D.
Henry F. Rohrs,	<i>Napoleon, O.,</i>	H. S. D.
Ernest Hinsdale Ryors,	<i>Salt Lake City, Utah,</i>	H. S. D.
Homer Erwin Safford,	<i>Plymouth,</i>	Univ. D.
Murray Maywood Sears,	<i>Holdrege, Neb.,</i>	Univ. M.
Horace Watson Sherwood,	<i>Ann Arbor,</i>	Normal D.
Meiyü Shie,	<i>Kiukiang, China,</i>	Ex.
Harry M. Shultz,	<i>Logansport, Ind.,</i>	Col. M.
John Erwin Speer,	<i>Mansfield, O.,</i>	H. S. D.
Samuel Bliss Stegeman,	<i>Allegan,</i>	H. S. D.
Robert Royer Stoner,	<i>Centre View, Mo.,</i>	Col. M.
Arthur Elias Sweatland,	<i>Ithaca,</i>	H. S. D.
Robert Earl Swigart,	<i>Tiffin, O.,</i>	H. S. D.
Horace Edward Toothaker,	<i>Campello, Mass.,</i>	H. S. D.
Clarence Abram Traphagen,	<i>Fenton,</i>	H. S. D.
Ernest Vidal Tucker,	<i>Pensacola, Fla.,</i>	Col. M.
Clark Francis Tuomy,	<i>Ann Arbor,</i>	Ex.
William Raymond Turner,	<i>Monroe</i>	H. S. D.
James Wallace Van Dusen,	<i>Cleveland, O.,</i>	Col. M.
William Vernor,	<i>Ann Arbor,</i>	Ex.
Eloise Walker,	<i>Old Mission,</i>	Univ. M.
Irene Beatrice Washington,	<i>Marlin, Tex.,</i>	Normal D.
Francis Joseph Welsh,	<i>Shamokin, Pa.,</i>	H. S. D.
John Sebastian Wever,	<i>Leavenworth, Kan.,</i>	H. S. D.
Charles Edward White,	<i>Rome, N. Y.,</i>	H. S. D.
Harry Hood Whitten,	<i>Nokomus, Ill.,</i>	Col. D.
Leon Spencer Wiggins,	<i>Lawrence,</i>	H. S. D.
Mary Ann Wild,	<i>Battle Creek,</i>	Col. M.
John Walter Wright,	<i>Ann Arbor,</i>	Ex.
Jacinto Zaratty Garcia,	<i>San Juan, Porto Rico,</i>	Col. D.
John Zieg,	<i>Allegheny, Pa.,</i>	H. S. D.

